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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,670	07/13/2001	Chui-Kuei Chiu	4425-162	1841

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BERKELEY LAW & TECHNOLOGY GROUP  
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BEAVERTON, OR 97006

EXAMINER
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NGUYEN, MADELEINE ANH VINH

ART UNIT	PAPER NUMBER
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2625

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/903,670

Applicant(s)

CHIU, CHUI-KUEI

Examiner

Madeleine AV Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-22, 25-28 and 31-33 is/are allowed.
- 6) ☒ Claim(s) 18, 19, 23, 24, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Response to Arguments***

1. Applicant's arguments filed on November 30, 2006 have been fully considered but they are not persuasive.

Regarding claims 18-19, 23-24, 29-30, applicant argues that Matama does not teach or suggest all of the claim limitations. Matama does not teach “replacing the saved information for the first pixel from the first scan with the summed pixel information from the first and second scans” as claimed.

In the first scanning, a relative value  $\Delta R$  of the gray balance of the corrected frame are calculated from equation (Eq.1) and the coefficient parameters in the linear equation on the right side are stored (col. 8, line 64 – col. 9, line 21). That can be read on the claimed invention of scanning a calibration chart at a first time and saving the information. In the second scanning, the coefficient parameters are retrieved and subjected to the arithmetic operations wherein the information for a first pixel from the second scan of the calibration chart ( $f_{2R}$ ) and the coefficient parameters are summed (Eq.4) and the summed information  $g_2$  is replaced in the LUT. It is noted that the coefficient parameters stored in memory 40 are output to condition setting section 48 and after the second scanning, they are accessed by the condition setting section 48 which process the summing operation. Matama teaches, “storing said relative value and during the second reading mode, modifying the image processing condition using said relative value stored during the first image reading mode and digital calibration pattern data that is read during the second image reading mode, in such a way that an image processing result concerning at least

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one of the color and the density in said second image reading mode agrees with an image processing result concerning at least one of the color and the density in said first image reading mode.” (col. 14, lines 35-45). Thus, the relative value is replaced with the summing result of the relative value and the digital calibration pattern data read in the second image reading mode.

In addition, Matama teaches, “modifying the image processing condition using the relative value stored during the first image reading mode and the digital calibration pattern data that is read during the second image reading mode, in such a way that image processing result concerning at least one of the color and the density in the second image reading mode agrees with the image processing result concerning at least one of the color and the density in the first image reading mode.” (col. 4, lines 13-21). Thus in the first scanning, the information for a first pixel is the first density (stored in 40) and in the second scanning, the information for the pixel is the second density (stored in 42). Matama further teaches, “the condition setting section 48 performs various operations including the construction of density histograms and the calculation of various image characteristic quantities such as average density.” (col. 8, lines 25-33). In order to calculate the average density the stored first density and the stored second density are summed, the summed result can be stored in order to divide it by a number of times that the calibration chart is scanned (in this case the number of times is 2) to produce an average value. In the process of averaging, the last summation result is always replaced the previous summation result in order to do the division for averaging.

It is noted that the claims must be given their broadest reasonable interpretation. During patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification. In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667

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(Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541m 550-51 (CCPA 1969).

If applicant does not agree with the above interpretation, clarification is needed on the information for a first pixel from the first scan, the information for a first pixel from the second scan and the summing of information for a first pixel from the second scan with the information for the first pixel from the first scan in order to overcome Matama's teaching.

The rejection of the claims 18-19, 23-24, 29-30 is maintained.

2. However, applicant's arguments with respect to claims 20-22, 25-28 and 31-33 have been fully considered and are persuasive. The rejection of claims 20-22, 25-28 and 31-33 has been withdrawn.

### ***Claim Rejections - 35 USC § 103***

3. Claims 18-19, 23-24, 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matama (US Patent No. 6,683,981).

Concerning claim 23, Matama discloses an apparatus (Fig.4) comprising means for scanning a calibration chart (calibration pattern 104) a first time (first scan or pre-scan); means for saving information for read data from the first scan of the calibration chart in a memory (pre-scan memory 40); means for scanning the calibration chart a second time (second scan or fine scan); means for combining the read data from the second scan with the read data from the first scan of the calibration chart; means for replacing the saved information from the first scan with

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the summed information from the first and second scans (Fig.4, Abstract; col. 8, lines 25-41; col. 9, line 24 – col. 10, line 56; col. 11, lines 10-33; col. 12, lines 33–62; col. 14, lines 10-45.

Matama does not specifically teach the saving of the first pixel from the first scan and the second scan and the summing information of the first pixel from the second scan with the information for the first pixel from the first scan of the calibration chart. However, since Matama teaches the first and second readings of the calibration chart and the summing of the information of the read data from the first and second readings, that also include the saving and summing for the first pixels of the first and second readings. It would have been obvious to one skilled in the art at the time the invention was made to consider Matama teaches the claimed limitation related to the first pixel in the first and second scans since the claim states means relating to “the first pixel” of the first and second scans and not “only the first pixel” of the first and second scans.

Matama does not specifically teach the summing information for the read data from the first and second scans and replacing the summed pixel information with the first pixel information from the first scan. However, Matama teaches the information from the first and second scans is combined in order to determine differences between the first and second scans and performing different adjustments and corrections. For instance, in the first scanning, a relative value  $\Delta R$  of the gray balance of the corrected frame are calculated from equation (Eq.1) and the coefficient parameters in the linear equation on the right side are stored (col. 8, line 64 – col. 9, line 21). That can be read on the claimed invention of scanning a calibration chart at a first time and saving the information. In the second scanning, the coefficient parameters are retrieved and subjected to the arithmetic operations wherein the information for a first pixel from

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the second scan of the calibration chart ( $f_{2R}$ ) and the coefficient parameters are summed (Eq.4) and the summed information  $g_2$  is replaced in the LUT. It is noted that the coefficient parameters stored in memory 40 are output to condition setting section 48 and after the second scanning, they are accessed by the condition setting section 48 which process the summing operation.

Matama teaches, "storing said relative value and during the second reading mode, modifying the image processing condition using said relative value stored during the first image reading mode and digital calibration pattern data that is read during the second image reading mode, in such a way that an image processing result concerning at least one of the color and the density in said second image reading mode agrees with an image processing result concerning at least one of the color and the density in said first image reading mode." (col. 14, lines 35-45). Thus, the relative value is replaced with the summing result of the relative value and the digital calibration pattern data read in the second image reading mode. It would have been obvious to one skilled in the art at the time the invention was made to consider the summing of the information read from the first and second scans in Matama equivalent to the summing of the information read from the first and second scans since Matama also teaches "processing the digital image data thereafter on said frame images under the thus adjusted image processing condition, wherein the step of adjusting said image processing condition based on the relative value to said digital calibration pattern data is performed during the first reading mode." (col. 14, lines 25-45).

Concerning claim 24, Matama further teaches means for producing an average value.

Matama does not directly teach means for dividing a value of the summed pixel information by the number of times that the calibration chart is scanned to produce an average value. However, Matama teaches calculation for obtaining an average density (col. 8, line 31)

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,which is dividing a summed value by a number to produce an average value. It would have been obvious to one skilled in the art at the time the invention was made as a matter of well known in the art to consider the calculation for obtaining an averaging density equivalent to the average value in the claim since Matama also teaches, "the condition setting section 48 performs various operations including the construction of density histograms and the calculation of various image characteristic quantities such as average density." (col. 8, lines 25-33). In order to calculate the average density the stored first density and the stored second density are summed, the summed result can be stored in order to divide it by a number of times that the calibration chart is scanned (in this case the number of times is 2) to produce an average value. In the process of averaging, the last summation result is always replaced the previous summation result in order to do the division for averaging.

Claims 18-19 are method claims of apparatus claims 23-24. Claims are rejected for the same rationales set forth for claims 23-24.

Concerning claims 29-30, Matama discloses an apparatus as discussed in claims 23-24 above. Matama further teaches a photo-sensor (CCD 34, Fig.1) and an analog-digital conversion circuit (col. 7, lines 33-36; col. 10, line 44) capable of scanning a calibration chart first and second times and a memory (40, Fig.4) capable of saving information read from the first scan of the calibration chart.

***Allowable Subject Matter***

4. Claims 20-22, 25-28 and 31-33 are allowed.



The following is an Examiner's Statement of Reasons for Allowance: Claims 20-22, 25-28 and 31-33 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches an apparatus and method comprising means for or steps of summing the results from the first subtraction operation, which subtracts a base value from a value for a first pixel from the first scan of the calibration chart, and the second subtraction operation, which subtracts the base value from a value for the first pixel from the second scan of the calibration chart; and replacing the saved result of the first subtraction operation with the results of the summing in the calibration memory.

#### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madeleine AV Nguyen whose telephone number is 571 272-7466. The examiner can normally be reached on Tuesday-Thursday 12:30-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Madeleine AV Nguyen  
Primary Examiner  
Art Unit 2625

January 11, 2007